

From Now to Next



Kathrin Buvac, President of Nokia Enterprise





West Coast Major Utility

Wildfire
prevention

Power grid
resilience

Safe
communities

Intelligent
smart grid

Our mission

Nokia Enterprise enables the **digitalization** of **asset-intensive** industries with **mission** and **business critical** needs providing **high performance networks** and **digital automation** solutions.

We are just warming up...

12% YTD
growth

Momentum
across all 5
segments

84 New
customers

Enterprise
focused R&D

Our focus

Hybrid cloud infrastructure

Connectivity at massive scale
across all sites & clouds

Private Networks

High-performance networking
and digital automation

The Journey to industry 4.0



Operational and Information Technologies (OT/ICT) Converge

INDUSTRY
4.0

OT		ICT
Mission-critical	Reliability	Carrier-grade
Specialized	Technologies	General-purpose/ standardized
Business process control	Service(s)	Media delivery & information services
Slow (decades)	Rate of tech change	Rapid (months to years)

>70%

enterprise are
investing in
IIoT today

49%

IT and OT are
collaborating on
IIoT projects
(32% in 2018)

Why private wireless now?

NOW

Spectrum availability

Vertical, MulteFire, CBRS, Service providers' spectrum

Industrial-grade solutions

Reduce complexity while maintaining flexibility & control



Ecosystem of industrial devices

>2500 non-phone IoT devices

GSMACOM data, 03/2019



The background of the slide is a blurred industrial setting featuring several white robotic arms in a factory environment. The arms are positioned at different heights and angles, creating a sense of depth and activity. The lighting is bright and even, highlighting the metallic surfaces of the machinery.

rexroth

A Bosch Company

Flexible
manufacturing

Automated
assembly line

Intelligent virtual
spaces

3D Printing
(Hannover Messe)



Telefonica



LAS BAMBAS

Employee
safety

Increased
productivity

Reliable
communications

Autonomous
haulage
(future)

Nokia Oulu Factory of the Future

Rapid
prototyping

Production
line agility

30% Y/Y
productivity gains

80% reduction
in lead time

WORLD
ECONOMIC
FORUM

Private wireless is surging

120+

Enterprises deploying
Nokia private wireless
in their premises

24

Transportation

35

Energy

32

Public sector

11

Manufacturing

18+

Other industries

27%

NAM

10%

LATAM

37%

Europe

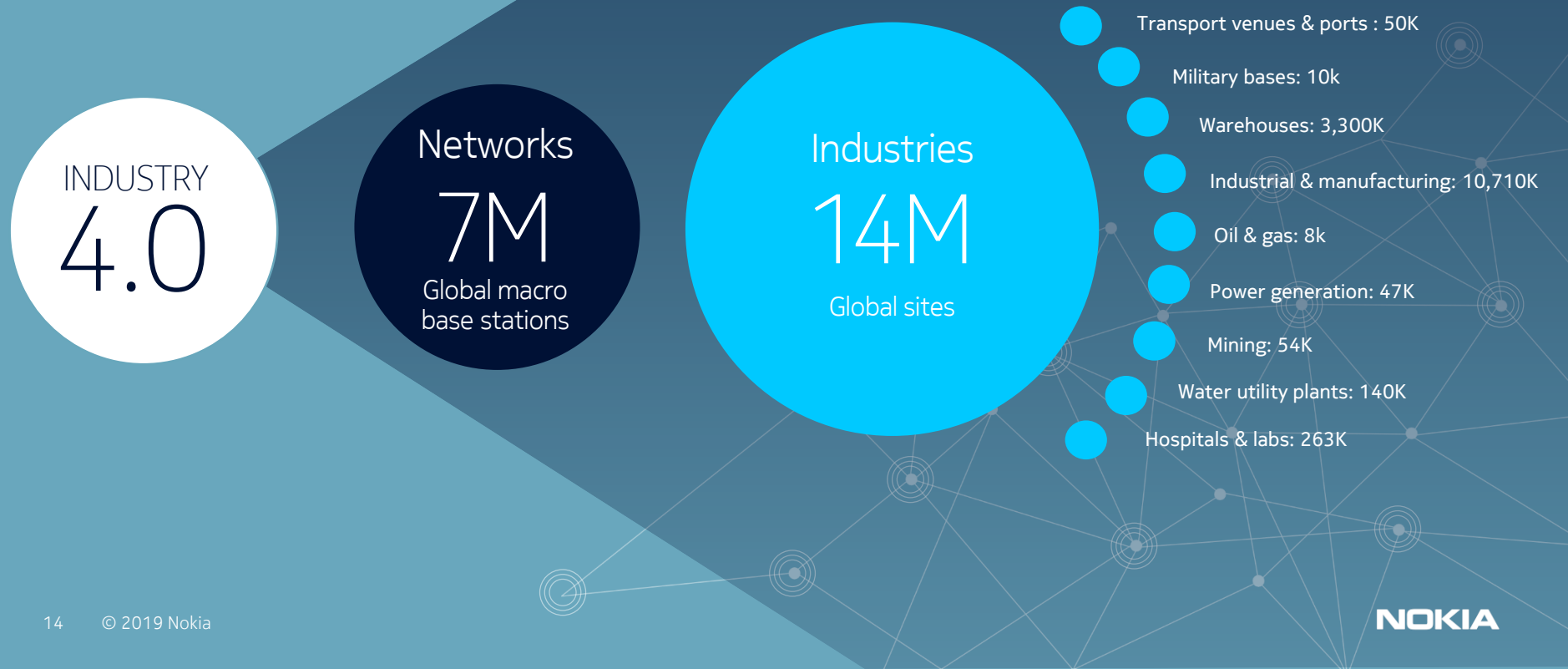
20%

APAC

8%

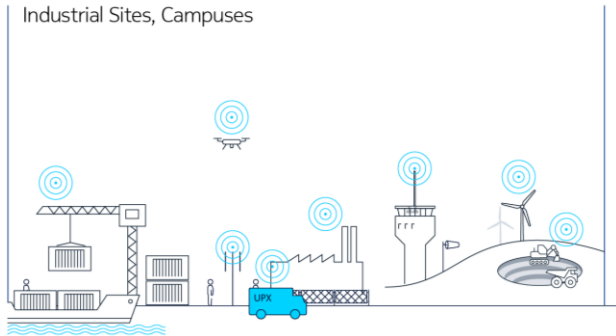
MEA

The market potential for industrial site private wireless is huge...



Vertical critical connectivity needs

Private & Public networks



Private Wireless Network

Private wireless networks

give enterprises their own dedicated wireless network for their operational needs

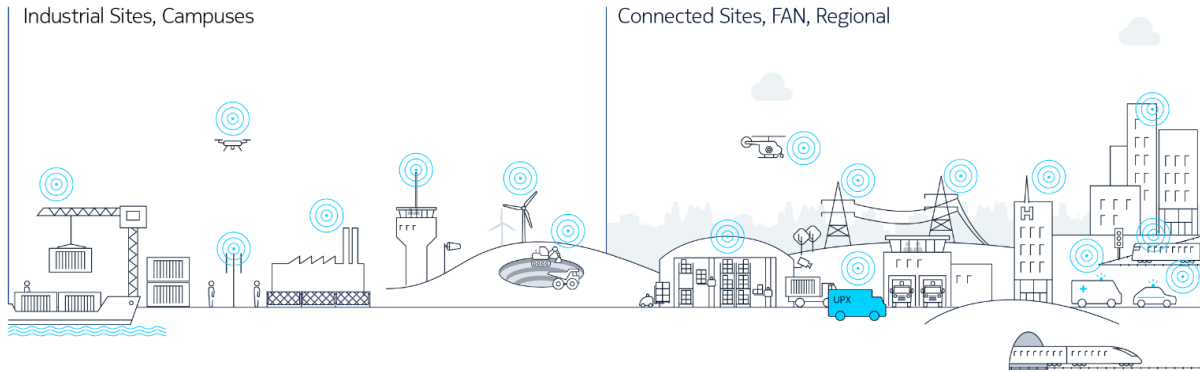
Public Wireless Network

Shared public networks

leverage CSP networks to guarantee SLA of enterprise assets in wider areas

Vertical critical connectivity needs

Private & Public networks



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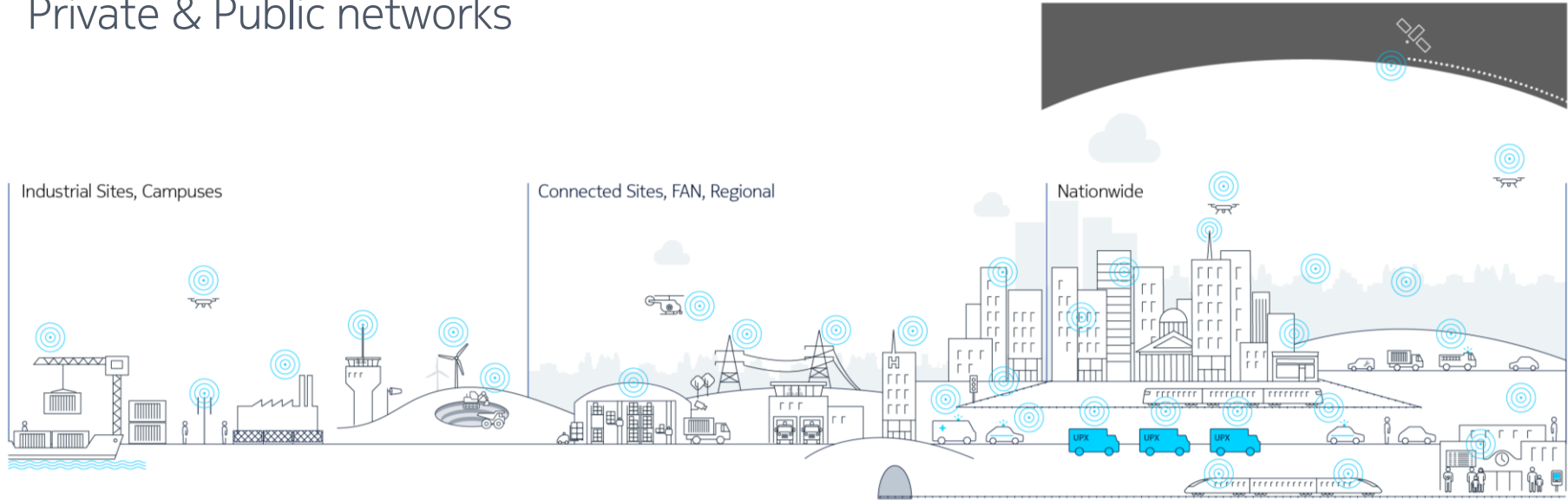
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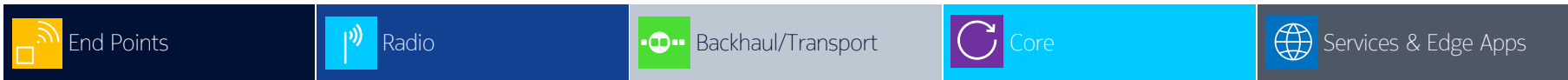
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Portfolio expansion to support diverse needs

Private wireless but end-to-end at the essence



Single end-to-end management and orchestration

All networks are not the same

Need flexibility to address diverse needs

Focus on
simplicity

Integrated
plug-and-play
solutions



INDUSTRY
4.0

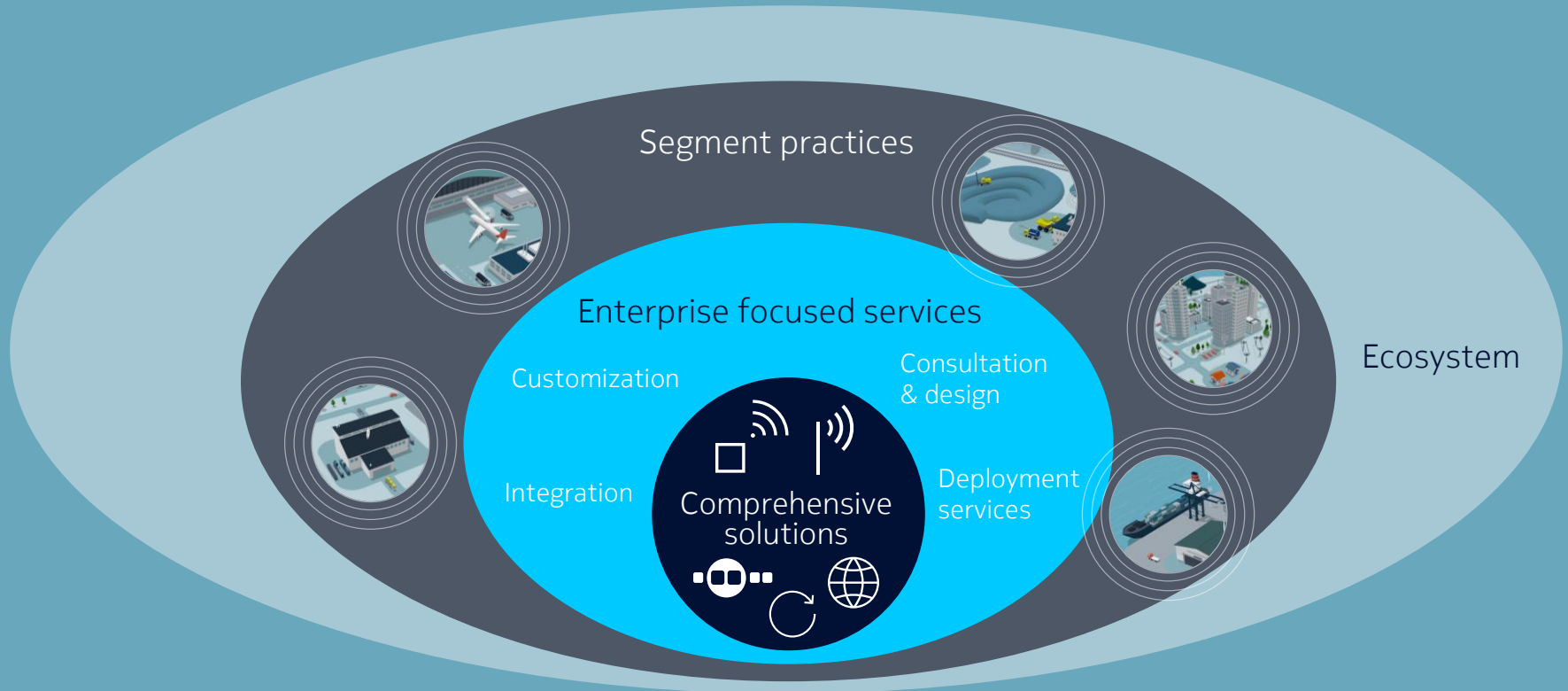


Need for
full control

Modular
customizable
solution

Complementing portfolio with segment practices and suite of services

Solve customer needs efficiently and with speed




Creating Powerful Partnerships



Service
provider
partners



Industrial
ecosystem
partners



Cloud, system
integrators &
consulting



Creating Powerful Partnerships

NOKIA



Microsoft



The future with 5G

Nokia Enterprise

Ambition
Double-digit growth

Customer demand
driven by
Hybrid cloud,
Private networks

Leading in
Private wireless
NOW with
120+ customers

Paving the
way for what's
NEXT with
5G

Creating
Powerful partnerships

